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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/773,818

02/02/2001

Martin Lee

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05/17/2004

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EXAMINER

NGUYEN, HUNG

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/773,818

Applicant(s)

LEE ET AL.

Examiner

Hung Henry V Nguyen

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 37-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-20,23 and 31-37 is/are rejected.
- 7) ☒ Claim(s) 3-5,21,22 and 24-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of group I (claims 1-35) in Paper No. March 12, 2004 is acknowledged.

Drawings

2. The informal drawings are submitted to permit examination only. Accordingly, new drawings are required in reply to this Office action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 6-8, 14-16, 18-20, 31-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Phillips (U.S.Pat. 4,676,649).

With respect to claims 1, and 31-37, Phillips discloses a stage device comprising all basic features of the instant claims such as: a base (16); a stage (11) positioned adjacent to the base and movable relative to the base; a bearing assembly (18) comprising at least one fluid/gas bearing interposed between the base and the stage for supporting the stage on the base and movable relative to the base and the stage (see figure 1).

As to claim 2, Phillips further teaches the stage device having a motor (54,98) for moving the stage relative to the base in at least one degree of freedom over a stroke of the stage (see col.8, lines 59-63).

As to claim 6, the stage motor is operable to move the stage relative to the base in five additional degrees of freedom such as X,Y,Z, , yaw, γ , δ , directions (see col.14, lines 60 thru col.15, line 30).

As to claims 7-8, Phillips further teaches the stage motor being planar motor and or linear motor (98,100).

As to claims 14-16, 18-20 , Phillips teaches that the fluid bearing is a preloaded and is provided by a gravitational weight of the stage, wherein the bearing assembly incorporates a vacuum preloading mechanism and comprises two bearing members, each including a port and a cavity, the port communicating with the cavity and connected to a vacuum pump such that the cavity can be evacuated through the port (see figure 11, col.12, lines 6-43; and claims 3-5 of Phillips).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9-13, 17, and 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Phillips (U.S.Pat. 4,676,649) in view of Sogard (U.S.Pat. 6,402,380).

With respect to claims 9, 17 and 23, Phillips discloses a stage device comprising substantially all of the limitations of the instant claims as discussed but lacks to show a “retaining member” or “at least one spring attached between the stage and the base” and the bearing assembly being operable in a vacuum. Sogard teaches a stage device having a retaining member/bearing seal (40) comprising an adjustable spring (52) attached between the first and second bases (42, 43) and the bearing assembly is operable in a vacuum (see abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Phillips and Sogard to obtain the teachings as specified in claims 9, 17, and 23. It would have been obvious to a skilled artisan to employ a retaining member/or spring as taught by Sogard into the bearing assembly of Phillips for at least the purpose of movement of the gas bearing relative to the bearing support. Further, it would have been obvious to one having ordinary skill in the art to have the bearing assembly of Phillips to be operable in vacuum as suggested by Sogard to prevent contamination of the bearing assembly.

Allowable Subject Matter

7. Claims 3-5, 21-22, 24-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record either alone or in combination, neither discloses nor makes obvious the combination of a stage device comprising, among other features, a fluid bearing with particular structures with specific functions, and satisfying conditions, as recited in the instant claims.

Art Unit: 2851

Prior Art Made of Record

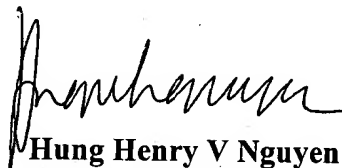
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Binnard (U.S.Pat. 6,603,531) and Sogard et al (U.S.Pat. 6,126,169) discloses stage devices having air bearing assembly disposed between the stage and the base.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 571-272-2112. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Hung Henry V Nguyen
Primary Examiner
Art Unit 2851

hvn
5/11/04